

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte KEVIN S. DONNELLY, THOMAS H. LEE and TSYR-CHYANG HO

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Appeal No. 1998-2710  
Application 08/582,045

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ON BRIEF

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Before HAIRSTON, HECKER and LALL, Administrative Patent Judges.

LALL, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 1, 3-6, 8-15, 18-19 and 25. Claims 2, 7, 16, 17, 20-24 and 26 have been canceled.<sup>1</sup>

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<sup>1</sup> An amendment after the final rejection was filed as Paper No. 24. However, the Examiner did not approve the entry of this amendment, Paper No. 25.

The invention is directed to a phase detector comprising a load circuit, a capacitive circuit, a first circuit, and a second circuit. The load circuit of the phase detector is formed by transistors and coupled with a power supply, a first node and a second node. The first node and the second node form an output of the phase detector. In operation, each of the first and second circuits of the phase detector receives the first and second signals, and the first and second circuits are controlled by the second signal to function with respect to the first and second signals at the same time such that the second error current cancels the first error current. This results in the first circuit detecting the phase difference between the first and second signals with minimized detection error. The invention is further illustrated by the following claim.

1. A phase detector, comprising:

(A) a load circuit formed by transistors and coupled to (1) a power supply and (2) a first node and a second node, wherein the first and second nodes form an output of the phase detector;

(B) a capacitive circuit having (1) a first capacitor coupled to the first node and ground and (2) a second

capacitor coupled to the second node and the ground;

(C) a first circuit having a first end coupled to the first node and a second end coupled to the second node, the first circuit detecting a phase difference between a first signal and a second signal, wherein the first circuit causes a first error current;

(D) a second circuit having the same circuit configuration as the first circuit but having a first end coupled to the second node and a second end coupled to the first node, wherein the second circuit causes a second error current that cancels the first error current due to cross-connection of the second circuit with respect to the first circuit, wherein each of the first and second circuits receives the first and second signals, wherein the first and second circuits are controlled by the second signal to function with respect to the first and second signals at the same time such that the second error current cancels the first error current in order for the first circuit to detect the phase difference between the first and second signals with minimized detection error.

The Examiner relies on the following references:

Hynecek	4,814,648	Mar. 21, 1989
Lee	5,422,529	Jun. 6,
1995		(filed Dec. 10,
1993)		

Funada et al. (Funada)	59-191906	Oct. 31, 1984
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Claims 1, 3-6, 9-10, 12-15, and 25 stand rejected under 35 U.S.C. § 103 over Funada and Lee, while claims 8, 11, and 18-19 stand rejected under 35 U.S.C. § 103 over Funada, Lee and Hynecek.

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Rather than repeat the positions and the arguments of Appellants and the Examiner, we make reference to the briefs<sup>2</sup> and the answer for the respective positions.

#### OPINION

We have considered the rejection advanced by the Examiner. We have, likewise, reviewed Appellants' arguments against the rejections as set forth in the briefs.

It's our view, after consideration of the record before us, that the rejections under 35 U.S.C. § 103 are not proper. Accordingly, we reverse.

At the outset we note that Appellants have elected, brief at page 7, claims 1, 3-6, 8-15, 18, 19, and 25 as Group 1, and claims 8, 11, 18, and 19 as Group 2.

#### Analysis

Before we discuss the two groups of claims, we give below the guidelines under 35 U.S.C. § 103 for our deliberations.

In our analysis, we are guided by the general proposition that in an appeal involving a rejection under 35 U.S.C. § 103, an Examiner is under a burden to make out a prima facie case

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<sup>2</sup> A Reply was filed as Paper No. 29 and was entered into the record, Paper No. 30.

of obviousness. If that burden is met, the burden of going forward then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). We are further guided by the precedent of our reviewing court that the limitations from the disclosure are not to be imported into the claims. In re Lundberg, 244 F.2d 543, 113 USPQ 530 (CCPA 1957); In re Queener, 796 F.2d 461, 230 USPQ 438 (Fed. Cir. 1986). We also note that the arguments not made separately for any individual claim or claims are considered waived. See 37 CFR § 1.192 (a) and (c). In re Baxter Travenol Labs., 952 F.2d 388, 391, 21 USPQ 2d 1281, 1285 (Fed. Cir. 1991) ("It is not the function of this court to examine the claims in greater detail than argued by an Appellant, looking for nonobvious distinctions over the prior art."); In re Wiechert, 370 F.2d 927, 936, 152

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USPQ 247, 254 (CCPA 1967) ("This court has uniformly followed the sound rule that an issue raised below which is not argued in that court, even if it has been properly brought here by reason of appeal is regarded as abandoned and will not be considered. It is our function as a court to decide disputed issues, not to create them.")

Now, we discuss the two groups of claims.

Claims 1, 3-6, 8-15, 18, 19, and 25

We take claim 1 as representative of this group.

After discussing each reference briefly and individually, the Examiner asserts, answer at page 4, that "it would have been obvious ... to incorporate the load circuit and the capacitors taught by the Lee reference into the Funada reference." After giving the explanation of the individual references at pages 7-11 of the brief, Appellants conclude, brief at page 15, that "as both Funada and Lee fail to teach or disclose the capacitive circuit, the combination of Funada with Lee fails to teach or disclose the claimed capacitive circuit." Appellants further conclude, brief at page 19, that "the combination of Funada with Lee fails to teach or disclose the claimed second circuit wherein the second circuit causes a

second error current that cancels a first error current due to cross-connection of the second circuit with respect to the first circuit." The Examiner in his response to the brief, answer at pages 5-7, does not identify what he considers as the two claimed nodes in Funada's Figure 1. The Examiner also does not explain how he contemplates the connecting of the capacitors "C's" in Figure 5 of Lee to the unidentified nodes of Funada to reach the claimed capacitive connections.

Furthermore, the Examiner merely asserts, answer at pages 6 and 7, that "the second error current generated in the second pair of transistors (3-4) in the Funada reference 'inherently' cancels the first error current generated in the first pair of transistors because the second pair of transistors (3-4) are cross-coupled to the first pair of transistors (1-2)." For something to occur "inherently" in a prescribed manner, it necessarily must occur in the prescribed manner. The Examiner has not so shown in the suggested combination of Funada and Lee. We do not agree with the Examiner's position.

Therefore, we do not sustain the obviousness rejection of claim 1 and its grouped claims 3-6, 9, 10, 12-15, and 25 over Funada and Lee.

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Claims 8, 11, 18-19

These claims are rejected over Funada, Lee and Hynecek. We take claim 8 as representative of this group. The Examiner asserts, answer at page 5, that "it would have been obvious ... to incorporate the equalizing transistor taught by the Hynecek reference into the Funada reference in view of the Lee reference." We note that since Hynecek does not cure the deficiency noted above in the combination of Funada and Lee, we do not sustain the rejection of claim 8 and its grouped claims 11, 18 and 19 over Funada, Lee and Hynecek.

In conclusion, we do not sustain the rejection under 35 U.S.C. § 103 of claims 1, 3-6, 9, 10, 12-15 and 25 over Funada and Lee, and of claims 8, 11, 18 and 19 over Funada, Lee and Hynecek.

Accordingly, the decision of the Examiner rejecting claims 1, 3-6, 8-15, 18-19, and 25 under 35 U.S.C. § 103 is reversed.

REVERSED



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KENNETH W. HAIRSTON	)	
Administrative Patent Judge	)	
	)	
	)	
STUART N. HECKER	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
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